

## Geographic variation in Winchell's Kingfisher *Halcyon winchelli*, of the Philippines

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Winchell's Kingfisher, *Halcyon winchelli*, is an endemic Philippine species belonging to a group of colourful forest kingfishers of the East Indies. It is restricted to the islands of the southern and central portions of the Philippine archipelago. Current literature generally treats it as a monotypic species; Peters (1945) listed *H. w. nigrorum* Hachisuka as "doubtfully distinct," and earlier (1939) had said that Hachisuka's description used "characters that will hardly stand up in a series" (although Peters apparently had before him only a single specimen of the species). All authors have considered *Halcyon alfredi* Oustalet, described from Bongao Island in the Sulu archipelago, to be a synonym of *winchelli*; Sharpe (1892) commented that the alleged differences between *alfredi* and *winchelli* were probably sexual, not geographical.

This is not a common species in collections. I have assembled a series of 45 specimens, representing every island from which the species has been reported, with the single exception of Siquijor. This relatively small series suffices to show that *Halcyon winchelli* varies geographically in the Philippines, with no less than five subspecies being recognizable.

Adult males of Winchell's Kingfisher are pure white below; females are more or less heavily washed with buff (varying geographically). Young males, if sex marks on labels are accurate, may have varying amounts of buff on the underparts. The central part of the crown, the wings and the back are essentially black, more or less overlaid with blue. Adult males have a more extensive wash of a brighter blue than do females. Young birds of either sex are dull black, with or without a blue wash, on the back and centre of crown (this being a geographically variable character). The area between the blue hind margin of the crown and the buff nuchal collar is black in all juveniles examined, even of the bluest-backed populations. The nuchal collar itself is usually of a paler buff in young birds; the wider collar attributed to females by McGregor (1909) and by Delacour and Mayr (1946) is an artifact of preparation; there is much individual variation in the width of this collar, but no correlation with sex is seen when similarly prepared specimens are compared. In at least some of the populations, males appear to average somewhat shorter in wing and tail than females. The wing was measured flat against the ruler; the bill measurement is that of the culmen from the anterior edge of the nostril. All measurements are in millimetres (to the nearest .5 mm.), and only adult birds were measured.

The five subspecies recognized are as follows:

### *Halcyon winchelli winchelli* Sharpe.

*Halcyon Winchelli* Sharpe, Trans. Linn. Soc. London (2), 1, 1877, p. 318 (Isabella [=Isabela], Basilan).

*Characters*: females with rich buff underparts; longer-winged than other races; crown as well as dorsum of juvenile dull black without blue wash.

*Measurements*: wing, ♂ 102, 104; ♀ 105, 106, 107, 108. Tail, ♂ 72,

73; ♀ 74.5, 75.5, 76.5, 78. Bill, ♂ 42, 44, 48 (the latter specimen appears to have an abnormally long bill-tip); ♀ 43, 43, 43, 45.

*Specimens examined*: Basilan, 13.

*Halcyon winchelli mindanensis*, subsp. nov.

*Type*: Chicago Natural History Museum no. 215257, adult male, collected at Matam, Katipunan, Zamboanga Province, Mindanao, Philippines, 29th May, 1952, by D. S. Rabor (collector's no. 2896).

*Characters*: sex for sex, brighter blue dorsally than *winchelli*, especially noticeable in males; subocular and ear-covert regions with more blue and less black; wing decidedly and tail somewhat shorter than *winchelli*; underparts of females like those of *winchelli* in colour; juvenile with both crown and dorsum washed with blue; wing-coverts of juvenile brighter and more extensively blue than in *winchelli* or the next two races.

*Measurements*: wing, ♂ 97, 98; ♀ 98.5, 99, 101, 103. Tail, ♂ 70, 73; ♀ 72, 72, 74, 75. Bill, ♂ 42.5, 43, 44; ♀ 40.5, 43.5, 44.

*Specimens examined*: Mindanao, 8.

*Remarks*: The measurements of one adult male (U.S. Nat. Mus. no. 191458), allegedly from Mindanao, have not been included above, as the label data appear to be questionable. The specimen was apparently given to Mearns; in the latter's handwriting, the label states "Collected by Mr. M. L. Robb at Zamboanga." A later hand has added a question mark, together with the qualification "Probably from near Zamboanga." Both in colour and in size (wing 101, tail 77) this specimen is typical of *winchelli*, and I suspect that it was actually collected in Basilan, which is near the Zamboanga region of Mindanao.

*Halcyon winchelli alfredi* Oustalet

*Halcyon alfredi* Oustalet, Le Naturaliste, 1890, p. 62 [not seen] (Bongao).

*Characters*: nearer *mindanensis* than *winchelli* in blueness of upperparts, ear-coverts, etc.; juvenile with blue wash on black of crown but not of dorsum; adult females with much paler buff underparts than either of the preceding two races; wing averaging between those of *winchelli* and *mindanensis*, but tail averaging longer than either.

*Measurements*: wing ♂ 100, 101, 101.5; ♀ 101, 103, 104. Tail, ♂ 74, 75, 75.5; ♀ 76, 78, 81. Bill, ♂ 43, 43, 43.5; ♀ 42, 42.5, 43.5.

*Specimens examined*: (all from Sulu archipelago) Tawi-Tawi, 3; Bongao, 2; Papahag, 1; Sulu, 1.

*Halcyon winchelli nigrorum* Hachisuka

*Halcyon winchelli nigrorum* Hachisuka, Birds of the Philippine Islands, pt. 3, 1934, p. 142 (Canloan Volcano, Negros).

*Characters*: Females like *winchelli* and *mindanensis* below, but both sexes with more black, less blue on crown, dorsum, and sides of face; blue of sides of crown and nape deeper; males with conspicuous patch of black (or black mixed with blue) at sides near bend of wing (wholly or mostly concealed in other races); wing and tail length about as in *mindanensis*, but bill shorter than in any other race; juvenile female with no blue on

dorsum and little on crown; juvenile male with trace of blue on dorsum and much blue on crown.

*Measurements:* wing, ♂ 96, 97, 98, 98, 99, 99, 102; ♀ 97.5, 100.5, 101. Tail, ♂ 68, 70, 71, 71, 71.5, 71.5, 72; ♀ 68, 73.5, 76. Bill, ♂ 35, 37.5, 39, 39.5, 39.5, 41, 42 (the latter specimen, like the longest *winchelli*, appears to have an abnormally long bill-tip); ♀ 40, 41, 41.

*Specimens examined:* Negros, 4 (including type); Bohol, 5; Samar, 1; Leyte, 1; Cebu, 1.

*Remarks:* The characters of this subspecies appear best developed in Negros, from which island came the shortest-billed specimens. Bohol material is close to that from Negros, and can be assigned to *nigrorum* with some confidence; that from Samar, Leyte and Cebu is less satisfactory. However, these specimens are not incompatible with *nigrorum*, and geographically variable birds from Samar and Leyte usually resemble Bohol birds most closely. Specimens from Siquijor, just off Negros, will undoubtedly be found to belong here as well. Delacour and Mayr (1946) are the only authors to list Leyte in the range of *Halcyon winchelli*; the basis for this is unknown, as a specimen (Am. Mus. Nat. Hist. no. 768287, juvenile female) collected at Barrio Patok, Dagami, Mt. Lobi, by G. Alcasid and M. Celestino on 19th July, 1961, appears to be the first actual record for Leyte. Rabor (1959) documented the disappearance of forest birds on the island of Cebu, and believed that deforestation had accounted for the extinction on that island of several species, including endemic forms. No mention was made (either in the list of forest birds seen or of those sought in vain) of *Halcyon winchelli*: its habitat is such that this species may well be among those extirpated on Cebu.

*Halcyon winchelli nesydrionetes*, subsp. nov.

*Type:* U.S. National Museum no. 314948, adult female, collected at "Badajos" (=Badajoz), Tablas Island, Philippines, 18th September, 1892, by D. C. Worcester and F. S. Bourns (collectors' no. 855).

*Characters:* underparts of females unlike those of any other race; paler, in general, even than *alfredi*, with throat and abdomen whitish, but with the lower cheeks and breast bright orange-buff, the latter forming a rather distinctly contrasting breast band; colour of upperparts, ear-coverts, etc., much as in the geographically remote *winchelli*, and males not certainly separable from that race (although the measurements suggest that in series, *winchelli* would probably average rather longer-winged); bill decidedly longer than in *nigrorum*, the geographically nearest race. One apparently juvenile bird from Romblon, sexed as female, has the orange-buff breast band even more clearly defined than in adult females. It has almost as much blue on the crown as an adult, but has the typical juvenile black band anterior to the buff nuchal collar. There is only a trace of blue wash on the black subocular and ear-covert regions, but the dorsum and wings are exceeded in blueness among juveniles only by the Mindanao specimen.

*Measurements:* wing, ♂ 100, 104; ♀ 100, 103.5. Tail, ♂ 72, 74; ♀ 70, 75. Bill, ♂ 44, 45; ♀ 44, 45.

*Specimens examined:* Romblon, 3; Tablas, 1; Sibuyan, 1.



Summary of principal diagnostic characters of subspecies of *Halcyon winchelli*.

Subspecies	Underparts of ♀	Blueness of adult dorsum	(1) crown and (2) dorsum of juvenile	Distinctive size character, if any
<i>winchelli</i>	rich buff	blue	(1) black (2) black	longest wings
<i>mindanensis</i>	rich buff	bright blue	(1) blue (2) blue	—
<i>alfredi</i>	pale buff	intermediate between above	(1) blue (2) black	longest tail
<i>nigrorum</i>	rich buff	least blue	(1) blue (2) black to blue	shortest bill
<i>nesydrioides</i>	whitish with buff breast band	blue	(1) blue (2) blue	—

*Remarks:* although only a very small series was available of this subspecies, I do not hesitate to give it a name, as it is so different from *nigrorum*, the geographically nearest race. The three islands of Romblon, Tablas and Sibuyan are zoogeographically related (McGregor, 1920). They are separated from the range of *nigrorum* by the relatively large islands of Panay and Masbate, from neither of which *Halcyon winchelli* has been reported. The present subspecies is thus not only the northernmost population of the species, but appears to be somewhat isolated. The name chosen is from the Greek *nesydrion*, diminutive of *nesos*, "island", and *naetes*, "inhabitant," reflecting the fact that the subspecies is known only from three relatively small Philippine islands.

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Taxonomic study of an uncommon bird such as *Halcyon winchelli* would be impossible without the generous co-operation of the curators of several museums. My institution, Carnegie Museum, has five specimens of this species (1 *alfredi*, 1 *nigrorum*, 3 *nesydrionetes*); the remainder were borrowed as follows: U.S. National Museum, 15; American Museum of Natural History, 12; Chicago Natural History Museum, 8; collection of S. Dillon Ripley, 3; Peabody Museum of Natural History at Yale University, 2. Travel to other museums was partly supported by a grant from the Chapman Memorial Fund of the American Museum of Natural History.

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### Further systematic notes on Mexican birds

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